

### **REMARKS**

Applicants have carefully considered the Official Action mailed on October 20, 2009.

Of the pending claims, the Official Action has rejected Claims 16-22 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Official Action also rejects Claims 16-22 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and use the invention.

In response, Claim 16 has been amended to remove the recitation of the synaptic transmission comprising long-term potentiation (LTP). Claim 16 has also been amended to recite decreasing neuronal synaptic transmission of a CA1 pyramidal neuron. Claim 18 has been amended to recite injecting the PKM $\zeta$  inhibitor into the cell. Support for these amendments can be found throughout the application, such as at page 25 lines 2-21. No new matter is entered into the disclosure by way of these amendments.

In view of the following remarks, Applicants request further examination and reconsideration of the present patent application.

### **Rejections under 35 U.S.C. §112**

Claims 16-22 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement.

Claim 16 has been amended to remove the recitation of the synaptic transmission comprising long-term potentiation (LTP). Claim 18 has been amended to recite injecting the PKM $\zeta$  inhibitor into the cell. This amendment to Claim 18 recites that the PKM $\zeta$  inhibitor is injected, which has support and is described in the specification, specifically in Example 6.

Claims 16, 18 and all claims depending therefrom of the present application fully comply with the written description. The subject matter of Claims 16 and all claims depending therefrom of the present application is described in the specification and is not new matter.

Therefore, it is respectfully requested that the rejection of Claims 16 -22 under 35 U.S.C. §112, first paragraph for allegedly failing to comply with the written description requirement be withdrawn.

Claims 16-22 stand rejected under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and use the invention.

Further, Claim 16 recites a method for decreasing neuronal synaptic transmission of a CA1 pyramidal neuron by contacting the neuron with an amount of a PKM $\zeta$  inhibitor. The method of Claim 16 does not necessitate the PKM $\zeta$  inhibitor crossing the blood brain barrier when contacting the neuron. Claim 18 has also been amended to recite injecting the PKM $\zeta$  inhibitor into the neuron.

Claim 16 has also been amended to recite decreasing neuronal synaptic transmission of a CA1 pyramidal neuron. Decreasing neuronal synaptic transmission of a CA1 pyramidal neuron is supported and enabled in the specification, specifically in Example 6.

Page 25 lines 2-21, teaches that a dose of 20 nanoMolar of a PKM $\zeta$  inhibitor is sufficient to achieve decreased neuronal synaptic transmission in a neuron. FIG.'s 7A-7D show that at this dose, the PKM $\zeta$  inhibitor completely eliminated persistent synaptic potentiation in the neuron.

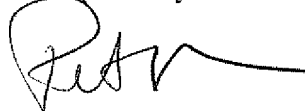
The experimental data found in Example 6 is an actual demonstration that the persistent synaptic potentiation of CA-1 pyramidal cells decreased with the introduction of a PKM $\zeta$  inhibitor. A person of ordinary skill in the art would recognize from this disclosure that an appropriate amount of a PKM $\zeta$  inhibitor would decrease neuronal synaptic transmission.

Unless there is a reason to doubt the objective truth of statements made in the application, they are presumed to satisfy the enablement requirement. *In re Marzocchi*, 439 F.2d 220, 224 (CCPA 1971). The Official Action has not provided a sufficient reason to doubt the truth of the experimental data reproduced in the present application, therefore the claimed invention does satisfy the enablement requirement. The Official Action cites sources to cast doubt on the effectiveness of a dose of an PKM $\zeta$  inhibitor, but these citations do not provide a sufficient reason to doubt the experimental data submitted, which shows a reduction in persistent synaptic potentiation in response to an addition of a PKM $\zeta$  inhibitor. None of the references proposed by the Official Action describe the specific process and claimed result of the present application.

Claim 16, 18 and all claims depending therefrom fully enable a person of ordinary skill in the art to use the invention. Therefore, it is respectfully requested that the rejection of Claims 16-22 under 35 U.S.C. §112, first paragraph be withdrawn.

For the reasons set out above, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested. Should the Examiner believe that anything further is needed to place the application in better condition for allowance, the Examiner is requested to contact the Applicant's undersigned representative at the telephone number below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Peter I. Bernstein', written over a horizontal line.

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